

**CLAIMS**

1. A catalytic muffler comprising:

a housing having a first chamber, and a second chamber fluidly communicating through a catalyst bed interspersed therebetween;

5 a first baffle assembly in said first chamber extending between said catalyst bed and said housing;

an inlet passage extending through said housing into said first chamber;

an outlet passage extending through said housing into one of said first chamber and said second chamber;

10 a second baffle assembly in said second chamber extending between said catalyst bed and said housing;

said first and second baffle assemblies acting in conjunction with said housing and said reactor bed to define a flow passage through said housing from said inlet passage through at least three discreet zones of said reactor  
15 bed to said outlet passage.

2. A catalytic converter as claimed in Claim 1 wherein:

one of said inlet and said outlet passages extends through an end of said housing;

20 the other of said inlet and said outlet passages extends through a side of said housing.

3. A catalytic converter as claimed in Claim 1 wherein:

said inlet and said outlet passages extend through a side of said housing.

5 4. A catalytic converter as claimed in Claim 2 wherein:

said inlet and outlet passages extend through an end of said housing.

5. A catalytic converter as claimed in Claims 2, 3 or 4 wherein:

said housing is cylindrical.

6. A catalytic converter as claimed in Claims 2, 3 or 4 wherein:

said reactor bed includes an oxidizing catalyst in one part thereof and a reducing catalyst in another part thereof.

15 7. A catalytic converter as claimed in Claim 6 wherein:

said housing is cylindrical.

8. A catalytic converter as claimed in Claim 4 wherein:

said inlet passage extends into said first chamber;

20 said outlet passage extends through said second end of said housing.

9. A catalytic muffler as claimed in Claim 8 wherein said reactor bed includes an oxidizing bed as one part thereof and a reducing bed in another part thereof.

5 10. A catalytic muffler as claimed in Claim 9 wherein:  
said reducing bed is upstream of said oxidizing bed.

11. A catalytic muffler as claimed in Claim 10 wherein:  
said housing is cylindrical.

10

12. A catalytic muffler as claimed in Claim 6 wherein:  
said reducing bed is upstream of said oxidizing bed.

15

13. A catalytic muffler as claimed in Claim 12 wherein:  
said housing is cylindrical.

14. A catalytic muffler as claimed in Claim 1 or 2 wherein:  
said housing is cylindrical and defined by cup shaped first and second parts joined at respective outer edges; and,

20

said first and second baffle members act as spacers to locate said reactor bed within said housing.

15. A catalytic muffler as claimed in Claim 1 or 2 wherein:

said housing is cylindrical and made up of cup shaped first and second parts, joined at respective outer edges to respective ends of a sleeve; and,

said first and second baffle assemblies act as spacers to located said  
5 reactor bed within said housing.

FOR OFFICIAL USE ONLY